REMARKS

Summary of the Amendment

Upon entry of the present Amendment, Paragraph **[0023]** will have been replaced to correct a minor informality therein.

By the present Amendment and Remarks, Applicant submits that the stated rejections have been overcome, and respectfully requests reconsideration of the outstanding Office Action and allowance of the present application.

Summary of the Office Action

In the subject Office Action, Claims 1-3, 6 and 8 are rejected under 35 U.S.C. §102(e) as being anticipated by art of record. Moreover, Claims 4-5, 7, 9 and 15 are rejected under 35 U.S.C. §103(a) as being unpatentable over the art of record.

Acknowledgement of Allowable Subject Matter

Applicant gratefully acknowledges the Examiner's indication that Claims 10-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Traversal of Rejection under 35 U.S.C. §102(e)

Applicant respectfully traverses the rejection of Claims 1-3, 6 and 8 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Publication No. 2003/0227075 to Kanemoto et al. [hereinafter "KANEMOTO"].

The Examiner submits that KANEMOTO discloses a memory card (1a-1c-1d, see Figures 1-2 and Figures 32-33) comprising: a leadframe LF having seven contacts 11 and a die pad 8; at least one semiconductor die 10a-10b mounted on the die pad 8 and electrically connected to the contacts 11 of the leadframe via bonding wires 9; a body 3 at least partially encapsulating the leadframe and including: opposed top and bottom surfaces; an opposed pair of longitudinal sides; and an opposed pair of lateral sides; each of the contacts 11 of the leadframe being exposed in the bottom surface of the body 3 and including a chamfer (see

Figures 16 and 21) which extends to one of the lateral sides thereof, wherein the bottom surface of the body is generally planar; and each of the contacts 11 defines a generally planar bottom surface which extends to the chamfer portion and is substantially flush with the bottom surface of the body, wherein the die pad has opposed, generally planar top and bottom surfaces, and a plurality of conductive traces 8 extend from respective ones of the contacts toward the die pad (see Figure 3), the traces being bent in a manner wherein the top surface of the die pad and the bottom surfaces of the contacts 11 extend along respective ones of spaced, generally parallel frame plane, and the bottom surface of the die pad extends along a pad plane which is disposed between and generally parallel to the frame planes; and the semiconductor die 10A-10B attached to the top surface of the die pad.

A Review of KANEMOTO

KANEMOTO discloses a memory card 1A and method of manufacturing the same. As is shown in Figure 2 (which is a bottom plan view), the memory card 1A includes a thin plate-like cap 2 having a rectangular shape formed of synthetic resin, and a sealing member 3 formed inside the cap 2. The cap 2 also includes an oblique cutout portion 4 which is formed in one corner thereof. A backside of the sealing member 3 serves as a backside of the memory card 1A. Plural connecting terminals 11 are formed in the vicinity of one end portion of the sealing member 3 for electrical connection between the memory card 1A and a digital device (Paragraph [0063]). When the memory card 1A is inserted into a slot of the digital device, the connecting terminals 11 and a connector of the slot are connected together electrically, whereby read of data stored in the memory chips 10A or write of data into the memory chips 10A is executed.

In re Independent Claims 1 and 8 (and Dependent Claims 2-3 and 6)

Applicant's independent Claim 1, recites, *inter alia*, . . . each of the contacts of the leadframe being exposed in the bottom surface of the body and including a chamfer portion which extends to one of the lateral sides thereof.

Applicant's independent Claim 8, recites, *inter alia*, . . . forming each of the contacts to include a chamfer portion which extends to one of the lateral sides of the body and a bottom surface which extends to the chamfer portion and is exposed in the bottom surface of the body. Applicant submits that KANEMOTO does not teach the aforementioned features of the present invention as recited in Claims 1 and 8.

The Examiner submits that the recessed area formed at the left hand side of the connecting terminals 11 on the backside of the leadframe LF_1 (as shown in Figures 16 and 21 of KANEMOTO) or the bent region formed at the left hand side of the connecting terminals 11 on the backside of the leadframe LF_1 (as shown in Figures 27 and 28 of KANEMOTO) each satisfy the "chamfer" feature recited in Applicant's Claim 1. Applicant respectfully disagrees.

A "chamfer" is defined as a beveled edge or corner, especially one cut at a 45° angle (see Webster's New World Dictionary, Second College Edition). A "bevel" is defined as an angle other than a right angle; or a sloping part or surface, as the angled edge of plate glass. Moreover, "beveled" or "bevelled" is defined as to cut an angle other than a right angle; or to slope at an angle; or to slant (see Webster's).

On the other hand, the recessed area as shown in Figures 16 and 21 of KANEMOTO which the Examiner submits meets the "chamfer" feature recited in Claims 1 and 8 is clearly formed at a right angle and *appears to be entirely devoid of any angled, beveled, or sloped portions whatsoever which extend to one of the lateral sides of the sealing member 3.* The bent region shown in Figures 27 and 28, while arguably being sloped, *clearly does not extend to one of the lateral sides of the sealing member 3.* Indeed, in the embodiments shown in Figures 16, 21, 22, 27 and 28 of KANEMOTO, the connector pins of a host socket will necessarily travel over both the cap 2 and portions of the sealing member 3 prior to coming into contact with those portions of the connecting terminals 11 which are exposed in the sealing member 3.

For the foregoing reason, and because KANEMOTO fails to teach the above-noted feature of the present invention, Applicant submits that KANEMOTO fails to disclose each and every feature of the present invention, as recited in independent Claims 1 and 8.

Accordingly, Applicant respectfully submits that the Examiner has failed to provide an adequate evidentiary basis to support a rejection under 35 U.S.C. § 102(e) and that the rejection of Claims 1 and 8 is improper and should be withdrawn.

Furthermore, Applicant submits that dependent Claims 2-3 and 6 are allowable at least for the reason that these claims depend from allowable independent Claim 1 and recite additional features that further define the present invention

Accordingly, Applicant respectfully submits that the Examiner has failed to provide an adequate evidentiary basis to support a rejection under 35 U.S.C. § 102(e) and that the rejection of dependent Claims 2-3 and 6 is improper and should be withdrawn.

Traversal of Rejection under 35 U.S.C. §103(a)

Over KANEMOTO

Applicant respectfully traverses the rejection of Claims 4-5 under 35 U.S.C. §103(a) as being unpatentable over KANEMOTO.

Regarding Claims 4-5, the Examiner submits that KANEMOTO discloses the chamfer portion of each of the contacts 11 extending at an angle relative to the bottom surface thereof. The Examiner admits, however, that KANEMOTO does not explicitly disclose the claimed angle of the chamfer portion in the range of from about 30° to about 60° or about 45° relative to the bottom surface thereof. Nevertheless, the Examiner then submits that it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the chamfer portion of the contact extending at an angle at the range of from about 30° to about 60° or about 45° because the angle range of the chamfer is in art recognized to be of variable importance which is subject to routine experimentation and it could be optimized by the practitioner.

Applicant respectfully submits that the Examiner's motivation appears to be based on impermissible hindsight rather than the teachings of KANEMOTO. As indicated above, in the embodiments shown in Figures 16, 21, 22, 27 and 28 of KANEMOTO, the connector pins of a host socket will necessarily travel over both the cap 2 and portions of the sealing member 3 prior to coming into contact with those portions of the connecting terminals 11 which are exposed in the sealing member 3. Even assuming, arguendo, that the embodiment shown in Figures 27 and 28 of KANEMOTO discloses chamfer portions in the connecting terminals 11, portions of the cap 2 and sealing member 3 still separate these chamfer portions from the closest lateral side of the memory card 1A. As such, since the purported chamfer portions do not appear to serve any functional purpose at all, there would simply be no motivation to selectively vary the angles thereof as suggested by the Examiner.

Accordingly, Applicant respectfully submits that the rejection of dependent Claims 4 and 5 under 35 U.S.C. § 103(a) as being unpatentable over KANEMOTO is improper and should be withdrawn.

KANEMOTO in view of SUN

Applicant respectfully traverses the rejection of Claims 9 and 15 under 35 U.S.C. §103(a) as being unpatentable over KANEMOTO in view of U.S. Patent No. 6,663,007 to Sun et al. [hereinafter "SUN"].

Regarding Claims 9 and 15, the Examiner submits that KANEMOTO discloses the memory card for insertion into a host socket having a plurality of connectors (paragraph [0004], lines 10-13, and paragraph [0059]), the memory card comprising: a leadframe LF having a plurality of contacts 11; at least one semiconductor die 10A-10B electrically connected to the leadframe; and a body 3 at least partially encapsulating the leadframe and including: opposed top and bottom surfaces; an opposed pair of longitudinal sides; and an opposed pair of lateral sides; each of the contacts of the leadframe being exposed in the bottom surface of the body. The Examiner then admits that KANEMOTO does not explicitly teach the host socket having connector pins for contacting the contacts 11 of the memory card upon the insertion of the memory card into the host socket connector.

The Examiner next points out that SUN, while related to a common socket device for memory cards similar to that of KANEMOTO (see card 20 in Figure 1B), teaches the host socket connector (40, Figure 2) having slot 44 with a plurality of connector pins (46/49, Figures 4-6) for the memory card 20 to be inserted therein. Then the Examiner submits that it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the host socket connector having connector pins for contacting the contacts of the memory card, as disclosed by SUN, since such host socket connector is commonly used in the art for accessing the memory card upon the insertion of the memory card into the host socket connector (see Figures 12-13). Moreover, the Examiner submits that KANEMOTO further discloses (see Figure 1) the memory card 1A including an index mark or the cut out portion 4 for determining a correct direction in which the memory card is to be inserted into a slot formed in digital device (paragraph [0059]); and thus, the connector pins of host socket connector would obviously contact the contacts of the memory card, upon the insertion of the memory card into the host socket connector.

A Review of SUN

SUN provides a common socket device for memory cards which is a common inserted base with an upper cover to offer a common space for receiving a smart media card, multimedia card, or a secure digital memory card. The common base may accomodate two or three different memory cards without the need to provide two or three different kinds of socket devices.

In re Independent Claim 9 (and dependent Claim 15)

Applicant's independent Claim 9, recites, *inter alia*, . . . the memory card *including a means for preventing the connector pins from contacting the body upon the insertion of the memory card into the host socket connector.* Applicant submits that even assuming, arguendo, that the Examiner's proposed combination of KANEMOTO and SUN is appropriate, ***the invention recited in Claim 9 still does not result***

In particular, Applicant respectively submits that the Examiner's combination of SUN with KANEMOTO, simply does not provide for, *inter alia*, . . . the memory card *including a means for preventing the connector pins from contacting the body upon the insertion of the memory card into the host socket connector.* Rather, the Examiner simply provides a socket or receptacle which is adapted to receive various different types of memory cards. It appears that the Examiner has misinterpreted the scope of Claim 9 wherein the *means for preventing the connector pins from contacting the body upon the insertion of the memory card into the host socket connector* is intended to be an integral part of the memory card, not an entirely detachable peripheral. For the reasons discussed in relation to Claims 1-8 above, the features of Claim 9 are clearly not satisfied by KANEMOTO, nor by SUN which is simply directed to a common socket device as indicated above.

Therefore, Applicant respectfully submits that no proper combination of KANEMOTO and SUN discloses or suggests the aforementioned features of the present invention and that the subject rejection is improper and should be withdrawn.

Accordingly, Applicant respectfully submits that the Examiner has failed to provide an adequate evidentiary basis to support a rejection under 35 U.S.C. § 103(a) and that the rejection of independent Claim 9 is improper and should be withdrawn.

Furthermore, Applicant submits that dependent Claim 15 is allowable at least for the reason that this claim depends from allowable independent Claim 9 and recites additional features that further define the present invention

Accordingly, Applicant respectfully submits that the Examiner has failed to provide an adequate evidentiary basis to support a rejection under 35 U.S.C. § 103(a) and that the rejection of dependent Claim 15 is improper and should be withdrawn.

KANEMOTO in view of BOLKEN

Applicant respectfully traverses the rejection of Claim 7 under 35 U.S.C. §103(a) as being unpatentable over KANEMOTO in view of U.S. Patent No. 6,444,501 to Bolken [hereinafter "BOLKEN"].

Regarding Claim 7, as best understood the Examiner submits that KANEMOTO discloses the claimed invention as detailed above except for a generally planar-sloped surface, which extends between the bottom surface and one of the lateral sides thereof. The Examiner then submits that BOLKEN while related to a similar memory card structure design teaches (see specifically Figures 1-4B) the body of the memory card 10 including a generally planar-sloped surface which extends between the bottom surface and one of the lateral sides thereof (see Figure 4B) in order to enhance safety and ensure ease of use (column 5, lines 48-?). The Examiner submits that it would have been obvious to a person of ordinary skill in the art at the time the invention was made to recognize that combining BOLKEN's teachings with KANEMOTO's invention would have been beneficial because BOLKEN's teachings of a generally planar sloped surface extended between the bottom surface and one of the lateral sides thereof helps to enhance safety and ensure ease of use.

In re Dependent Claim 7

Applicant's dependent Claim 7, recites, *inter alia*, . . . the chamfer portion of each of the contacts defines a generally planar chamfer surface which is substantially flush with the sloped surface of the body. Applicant submits that even assuming, arguendo, that the

Examiner's proposed combination of KANEMOTO and BOLKEN is appropriate, ***the invention recited in Claim 7 still does not result.***

In BOLKEN, the card 10 is described as including a first molded plastic casting or body 26 which is molded onto the circuit side 16 of a substrate 12 to encapsulate a semiconductor component 14 mounted thereto. A second molded plastic casting or body 28 is described as surrounding the body 26 and enclosing the peripheral edge 30 of the substrate 12 to comprise exterior portions of the card 10. The body 28 is described as defining a peripheral edge 50 of the card 10 which has rounded corners 49 and a chamfered corner 98. The chamfered corner 98 is itself described as being used to generally identify the end of the card 10 having external contacts 24 to ensure that a user inserts the card 10 in a proper orientation (column 6, lines 46-49). The contacts 24 are themselves exposed in a backside surface 22 of the card 10. As is clearly shown in Figures 3 and 4 of BOLKEN, the contacts 24 do not include any chamfer portion whatsoever, and clearly do not extend to the peripheral edge 50 of the card 10. Rather, the reference numeral 22 shown in Figure 4 includes a leader line which extends to a rail segment of the body 28 which actually extends between the contacts 24 and the peripheral edge 50.

It is clear from the teachings of BOLKEN, that the advancement of the card 10 into a host socket connector will result in the connector pins of such host socket connector traveling over the rail segment defined by the body 28 prior to coming into electrical communication with the contacts 24. Thus, Applicant respectfully submits that like KANEMOTO described above, BOLKEN is clearly devoid of any teaching or suggestion regarding the inclusion in the card 10 of any features which satisfy Claim 7 and are used for preventing the connector pins of the host socket connector from contacting the body 28 upon the insertion of the card 10 into a host socket connector.

Since neither KANEMOTO nor BOLKEN teach or suggest a chamfer portion of each of the contacts defining a generally planar chamfer surface which is substantially flush with the sloped surface of the body, Applicant respectfully submits that no proper combination of KANEMOTO and BOLKEN discloses or suggests the aforementioned features of the present invention and that the subject rejection is improper and should be withdrawn.

Accordingly, Applicant respectfully submits that the Examiner has failed to provide an adequate evidentiary basis to support a rejection under 35 U.S.C. § 103(a) and that the rejection of dependent Claim 7 is improper and should be withdrawn.

CONCLUSION

In view of the foregoing, it is submitted that none of the references of record, when considered either alone or in any proper combination thereof, anticipate or render obvious Applicant's invention as recited in Claims 1-9 and 15 The applied references of record have been discussed and distinguished, while significant claimed features of the present invention have been pointed out.

Applicant respectfully submits that each pending claim of the present application meets the requirements for patentability under 35 U.S.C. §§ 102 and 103. Accordingly, allowance of the present application and all the claims therein is respectfully requested and believed to be appropriate.

If any additional fee is required, please charge Deposit Account Number 19-4330.

Respectfully submitted,

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